

	Tevatron (Fermilab)
Physics start date	1987
Physics end date	-
Particles collided	$p\bar{p}$
Maximum Beam Energy (TeV)	0.980
Luminosity ($10^{30} \text{cm}^{-2}\text{s}^{-1}$)	50
Time between Collisions (μs)	0.396
Crossing angle (μrad)	0
Energy spread (units 10^{-3})	0.14
Bunch length (cm)	57
Beam radius (10^{-6}m)	$p : 39$ $\bar{p} : 31$
Free space at interaction point (m)	± 6.5
Luminosity lifetime (hr)	11-13
Filling time (min)	30
Acceleration period (s)	86
Injection energy (TeV)	0.15
Transverse emittance ($10^{-9}\pi \text{ rad-m}$)	$p : 4.3$ $\bar{p} : 2.7$
β^* , amplitude function at interaction point (m)	0.35
Beam-beam tune shift per crossing (units 10^{-4})	$p : 14$ $\bar{p} : 70$
RF frequency (MHz)	53
Particles per bunch (units 10^{10})	$p : 24$ $\bar{p} : 3$
Bunches per ring per species	36
Average beam current per species (mA)	$p : 66$ $\bar{p} : 8.2$
Circumference (km)	6.28
Interaction regions	2 high L
Utility insertions	4
Magnetic length of dipole (m)	6.12
Length of standard cell (m)	59.5
Phase advance per cell (deg)	67.8
Dipoles in ring	774
Quadrupoles in ring	216
Magnet type	s.c. $\cos\theta$ warm iron
Peak magnetic field (T)	4.4
\bar{p} source accum. rate (hr^{-1})	13.5×10^{10}
Max. no \bar{p} in accum. ring	2.4×10^{12}

Table 1: Tevatron Collider parameters